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MAINTAINING *the* HEALTH *of* LIVESTOCK IN TRANSIT

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MAINTAINING THE HEALTH OF LIVESTOCK IN TRANSIT

By A. W. Miller, *Chief, Packers and Stockyards Division, Bureau of Animal Industry*

Although in recent years much improvement has been made in the equipment used for shipping livestock and in the safe and humane handling of them, heavy losses still occur. In addition to actual deaths other losses result from poor condition of the animals, owing to disease, injuries, exhaustion, and derangement of the digestive processes. Whether livestock are intended for slaughter or for reshipment as feeders, their condition has much to do with a ready sale at satisfactory prices.

When an animal's condition is impaired by injury or other direct means, the cause is usually apparent and can be removed. But when animals that are apparently in good condition when they leave the farm or ranch become sick or are noticeably " off their feed " on arrival at their destination, the problem is often perplexing. This leaflet discusses the prevention of such conditions and outlines practical means of maintaining the health of livestock in transit. The key to the reduction of shipping losses is greater care in handling, which in turn conserves the vitality of stock so that they can better resist the hardships of travel.

Losses Greatest in Fall and Winter

Lowered vitality makes livestock subject to infections which animals of normal vigor more readily resist. The infectious, febrile disease, hemorrhagic septicemia, also known as shipping fever (fig. 1), is the most serious of a group of cattle maladies which commonly result from neglect or exposure of animals in transit or shortly after their arrival at their destination. Losses from this source vary from year to year, depending on whether the disease is of a mild or virulent type, but they are heaviest during the fall and winter months. The death rate in affected shipments usually ranges from 1 to 3 per cent, but in some instances it may be as high as 10 or 15 per cent. Conservative estimates place the average yearly toll of shipping fever and kindred ailments at fully a million dollars, and in some years it may run as high as three or four million.

To aid in reducing the heavy losses which these diseases have been inflicting on the livestock industry, a committee [1] representing various commercial interests has cooperated with the United States

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[1] The committee's membership includes: E. C. Brown, representing the National Livestock Exchange; Charles E. Day, the National Traders' Exchange; W. J. Embree, the Western Weighing and Inspection Bureau, and the railroads; L. W. Kube, public stockyards; and F. G. Ketner, the National Livestock Producers' Association.

Department of Agriculture in studying the situation and in formulating recommendations for improvement. Based on exhaustive studies of both the scientific and practical aspects of the subject, the evidence shows that the losses sustained in the past could have been largely prevented by improved methods of handling and by vaccination with suitable biological products.

Since the infection of hemorrhagic septicemia is commonly harbored in the systems of animals, there is little hope of escaping additional exposure during shipment. It is important to remember, also, that animals of normal vigor usually resist the infection, hence the need of protecting them against devitalizing influences, such as exposure to severe weather, changes in the routine of feeding and watering, excitement, and overexertion. Irregularity in feeding and watering should be avoided to prevent derangement of the digestive processes.

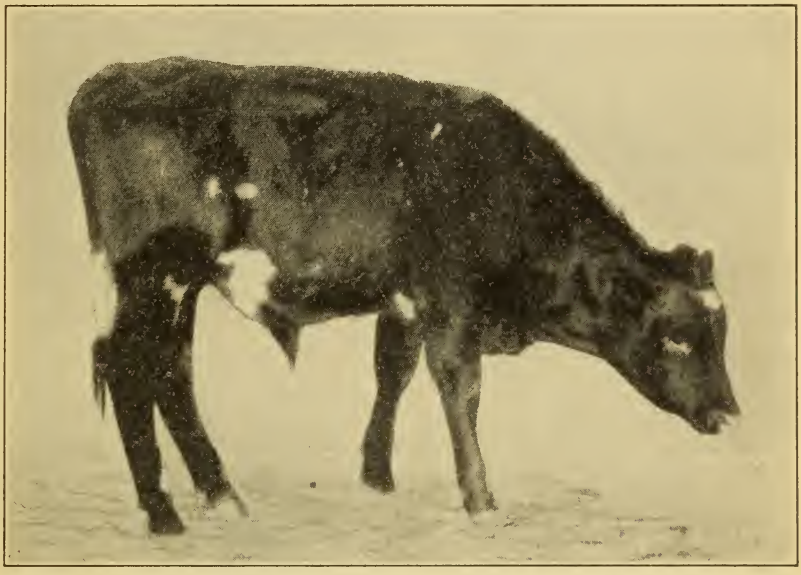

FIGURE 1.—A steer affected with hemorrhagic septicemia, showing typical attitude of dejection

It is especially important to the producer of feeder cattle that his animals reach the market or the feed lot in a thrifty condition. Unthrifty cattle are practically always unprofitable to the owner who feeds them, and this naturally is prejudicial to the interests of producers who have feeders to sell.

For the benefit of shippers, commission men, traders, feeders, and others who handle cattle, the following detailed recommendations are made:

Avoid hard driving and allow ample time for rest before loading. (Figs. 2 and 3.) On arrival at the pens, the animals should not be allowed to fill up on water, but should first have rest and be fed some native grass or non-legume hay.

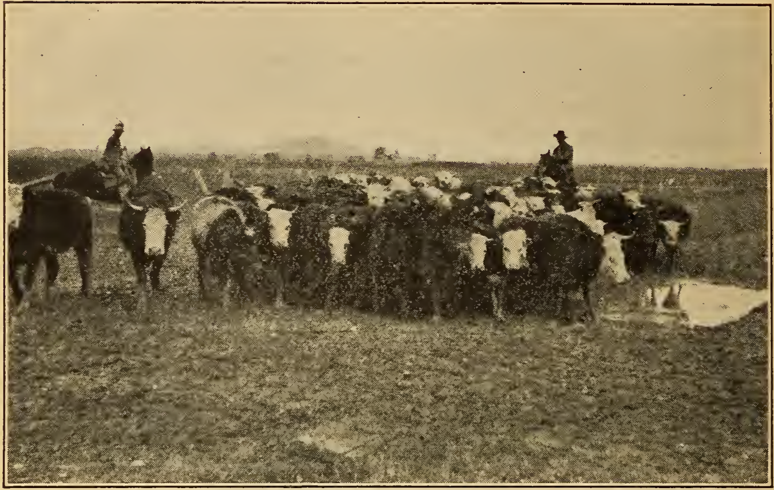

FIGURE 2.—On the way to the railway loading point hard driving should be avoided, thereby conserving the vitality of the cattle

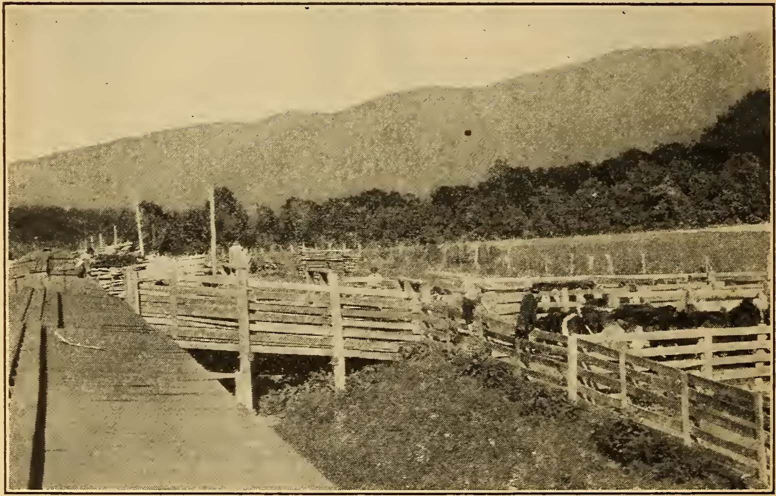

FIGURE 3.—Steers ready for shipment at a country point. Animals should be rested following the drive to the railroad, lightly fed if hungry, and watered moderately before loading

Avoid overcrowding cattle in the cars. In cold weather, bed the car well. In very severe weather, in northern latitudes, it may be well to line the side walls of the car with heavy paper, especially if the cattle are young or unthrifty. (Fig. 4.)

Give feed and water at proper intervals en route. When unloaded for feed, water, and rest, the cattle should have plenty of time to become well rested. The frontispiece shows equipment that is commonly provided for the purpose.

Under the 28-hour law five hours' rest is the minimum specified time, and the railroads ordinarily allow that period, exclusive of the time of unloading and reloading. It is better, however, to give stocker and feeder cattle special care, allowing at least eight hours for feed, water, and rest. Plenty of rest and regular feeding and watering are essential if animals are to arrive at their final destination in the best possible condition. Cows in an advanced stage of pregnancy, commonly termed "springers," should receive particular attention.

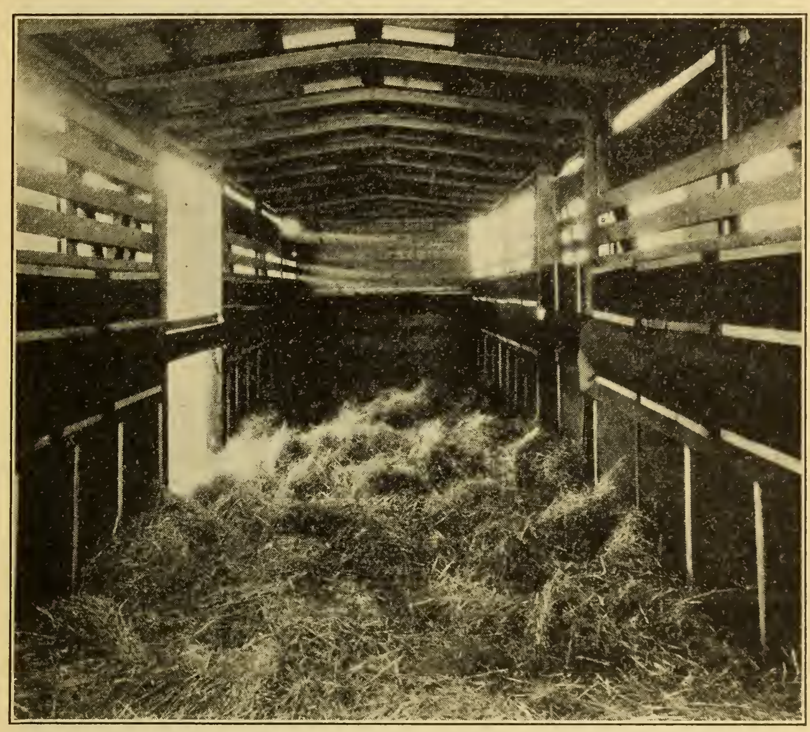

FIGURE 4.—A stock car properly bedded for cattle and lined with paper as a protection against excessive exposure in cold weather. Note that the paper extends high enough to prevent strong air currents from striking the cattle directly

The common practice of withholding water from animals until they are very thirsty so that later they will take a heavy fill is harmful. The practice tends to upset the digestive system so seriously that the animals are slow in resuming normal feeding and gain in weight. It is therefore recommended that this damaging process be discontinued through general agreement among livestock owners and handlers. (Fig. 5.)

Care of Shipments from Public Markets

In the case of stocker and feeder cattle that pass through the public market, the same attention should be given to the shipments back to the country that has been outlined for the shipments to market. Following the arrival of cattle at their final destination in the country, they should receive special attention and care to help them over the period of lowered vitality resulting from the hardships of travel. (Fig. 6.)

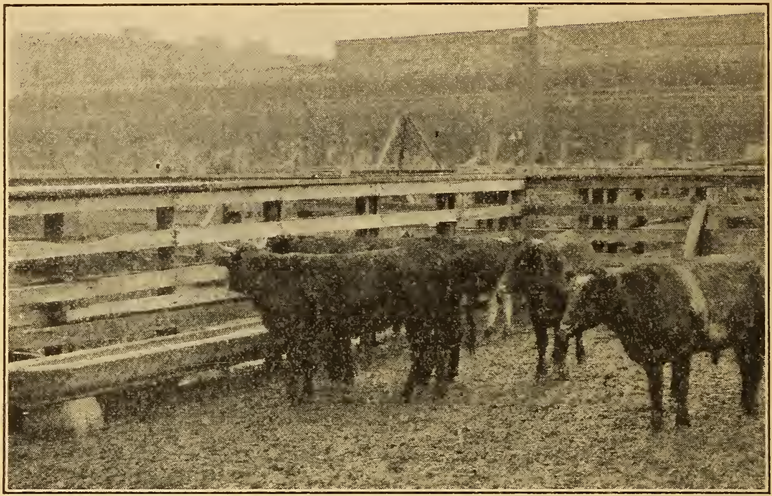

FIGURE 5.—Properly equipped pen at public stockyard, including a good watering trough. Care in feeding and watering stock tends to prevent serious digestive derangement

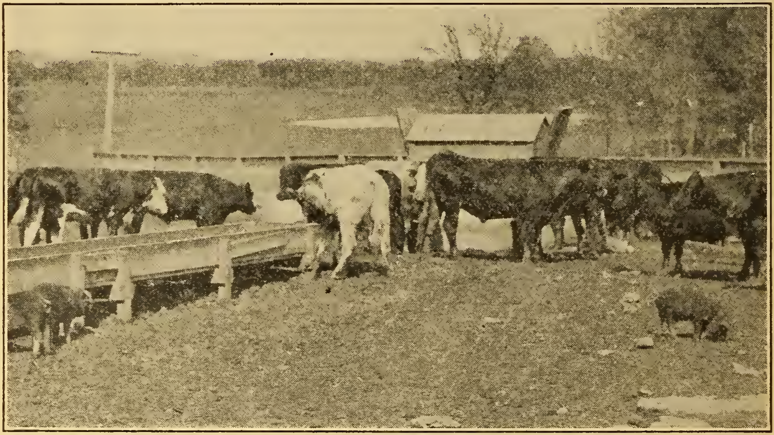

FIGURE 6.—Feeder cattle should receive special care and attention for several days following their arrival at the feed lot and should be put on feed gradually

Feeder cattle on arrival should be given a fill of dry roughage, such as timothy hay, prairie hay, or corn stover. After having access to this roughage a few hours, they should have water, but not all they will drink. By the end of the first day, give free access to dry roughage and water.

Most feeder cattle are raised on grasses different from those found in the fattening areas. Therefore, if they are to be pasture fed, let them become accustomed to the new grasses gradually, giving them at first only a few hours' grazing each day, especially if the grass is still green.

If feeder cattle are intended for dry-lot feeding with no pasture available, give them access to cornstalk fields or feed them on corn fodder and hay for from 10 days to two weeks before starting them on the fattening rations.

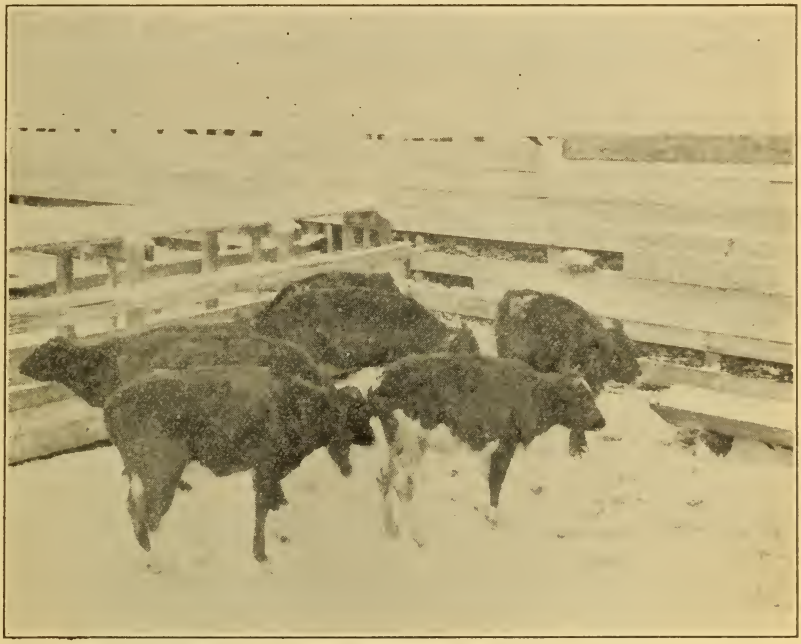

Figure 7.—When cattle have been shipped long distances their vitality is often low. Note the "crimped-up" attitude of these cattle, the temperature being 10° below zero. Under such adverse conditions dry sheds and careful attention to feeding and watering help to restore normal vigor

If the cattle arrive in cold weather, especially if it is wet and stormy, provide adequate dry shelter. (Figs. 7 and 8.) Severe exposure to cold and dampness combined, during the period of low vitality, is liable to have very serious results. If there is any sign of sickness, segregate diseased animals and keep them as quiet as possible.

Use of Biological Products

Many stock owners and veterinarians have used various biological products to prevent hemorrhagic septicemia or to control outbreaks. Success has attended the use of these products in many instances, but results have been disappointing in others. It is important to bear in mind that biological products for use against hemorrhagic septicemia are either preventive or curative. In the first class are bacterins and aggressin; in the second, serum. The bacterins and aggressin are used to establish immunity and thus prevent the development of the disease. The serum is used as a curative agent. Available information indicates that a high degree of immunity is established within 10 days after treatment, by the use of either bacterins or aggressin.

Experimental work by the Bureau of Animal Industry and by other agencies tends to show that the administration of bacterins and aggressin to animals in transit does not bring about any reduction in the losses from this disease. In fact, there is some evidence that losses among animals to which aggressin has been administered while they are in transit are greater than among untreated animals. Consequently, treatment of feeder and stocker cattle with aggressin while in transit or within a few days after they reach their destination should be discouraged, and treatment of these classes of animals with bacterins during such periods probably is of little or no value.

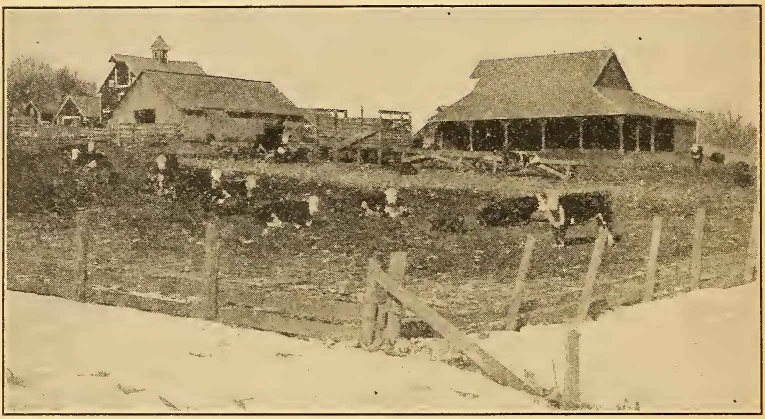

FIGURE 8.—Adequate dry shelter aids in maintaining the vitality of cattle and is especially desirable when feeder stock arrive in wet, stormy weather

Antihemorrhagic-septicemia serum possesses some curative value, and its use in preference to bacterins or aggressin is recommended when treatment is to be administered to cattle in transit or within a few days after they arrive at their destination, especially if some of the animals in the shipment already show symptoms of disease. Best results, however, may be expected by arranging to have feeder and stocker cattle treated, either with bacterins or with aggressin, at least 10 days before shipment. In all cases where veterinary biological products are used they should be administered by competent veterinarians.

The limits of this leaflet do not permit a full discussion of the detailed care of the various kinds of livestock or of control measures for the numerous diseases and parasites which may affect the health of animals in the course of their shipment and marketing. The foregoing recommendations, however, deal with the principal causes of loss, and if followed should greatly reduce the number of animals arriving in an unthrifty or diseased condition.

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